State of Hawaii
DEPARTMENT OF LAND AND NATURAL RESOURCES
Division of Aquatic Resources
Honolulu, Hawaii 96813

March 23, 2007

Board of Land
and Natural Resources
Honolulu, Hawaii

REQUEST FOR APPROVAL TO AMEND/EXTEND SEVEN (7) PROJECT AGREEMENTS WITH THE RESEARCH CORPORATION OF THE UNIVERSITY OF HAWAII FOR FY07 FOR THE FOLLOWING PROJECTS: CORAL REEF INITIATIVE (CONTRACT NO. 49090), COASTAL STOCK ENHANCEMENT (CONTRACT NO. 49820), STREAM/ESTUARINE STUDIES (CONTRACT NO. 51059), MARINE POPULATION SURVEY (CONTRACT NO. 51058), ULUA TAGGING (CONTRACT NO. 52851), FINFISH BROODSTOCK AND LARVAE CULTURE (CONTRACT NO. 52994), AND HAWAII MARINE RECREATIONAL FISHING SURVEY (CONTRACT NO. 48518)

Submitted herewith for your consideration is a request to amend/extend seven (7) existing project Agreements between the Board of Land and Natural Resources and the Research Corporation of the University of Hawaii (RCUH). The Amendments will add funding and allow continuation of the projects from July 1, 2007 to June 30, 2008. The projects, described below, are for fisheries research activities that support the Division of Aquatic Resources' (DAR) mission in the management of our fishery resources. Funds for the projects are contained in the Operating Budget for FY 2007-08, though adjustments may be made by the 2007 Legislature and/or through administrative allocations.

The Agreements enable DAR to secure assistance from RCUH in implementing the projects. RCUH's assistance is required in order for the DAR to meet project goals and objectives in a timely way.

Coral Reef Initiative (Contract No. 49090)

The Coral Reef Initiative project continues activities mandated under the National Coral Reef Conservation Act and the Antiquities Act. Activities include development of an overarching coral reef strategy to link various ongoing initiatives in the main Hawaiian Islands and Northwestern Hawaiian Islands (NWHI) projects, e.g. design of a research plan for NWHI resources; development and implementation of research and monitoring activities in the NWHI, review and assessment of all research permits, development of a multi-agency management plan for the NWHI Marine National Monument and seeking World Heritage Site designation. Project funding is $228,120; $225,120 in Federal funds from NOAA and $3,000 from State General Fund (LNR 401).

Coastal Fisheries Stock Enhancement (Contract No. 49820)

Monitoring will be continued in this project to determine the stocking effects of past experimental stock enhancement and focusing on areas of promising recruitment/nursery sites for coastal marine recreational fish species. Personnel will be involved in conducting estuary and coastal surveys, monitoring nursery habitat, improving methods/technology of remote hatchery culture with continued efforts to spawn striped mullet; tagging and releasing various recreational coastal gamefish species to track long-term movements; investigate the impact of the alien mullet, *Valamugil engeli*, on native mullet; track daily movements of mullet, goatfish, papio and related species in the Wailoa River/Hilo Harbor estuary

nursery. Project appropriation is $163,212; $111,159 in Federal funds from the Sport Fish Restoration Program, $13,951 from Sportfish Special Fund (LNR 805), and $38,102 from State General Fund (LNR 401).

Stream/Estuarine Fisheries Studies (Contract No. 51059)

This project involves research on native stream species and adjoining estuarine habitats and to demonstrate ridge to reef connectivity. Project activities include the following on-going work: continue conducting stream surveys, especially streams or stream sections not yet surveyed; adapt methods, such as Rapid Stream Assessment where optimal visibility is not required; encourage community partnerships for stream monitoring, finalize the DAR Aquatic Survey Geo-database, provide spatial analysis using GIS software, and consult project leaders to standardize data collection; assessing/defining the links between stream and estuarine ecosystems and coastal recreational fish species; and defining the role of estuaries as nursery habitat for game fish species. Project appropriation is $249,212. This includes $167,909 from the U.S. Fish and Wildlife's Sport Fish Restoration Program and $33,000 from its State Wildlife Grant; $10,803 from Sportfish Special Fund (LNR 805), and $37,500 from State General Fund (LNR 401).

Marine Population Survey (Contract No. 51058)

This project conducts research to provide scientific bases for establishing fishing regulations to support DAR's fisheries management goals and objectives. This year, Phase II will focus on establishing coral reef fishery-related management tools for coral reef species (bag limits, minimum size, and seasonal closures) and regulatory amendments to sustain coral reef fish and other aquatic life populations. In addition, new regulations for species not currently regulated but currently harvested will be examined. New bag and seasonal limits will be proposed for rule establishment, and a new proposed list of additional species to be protected will be assessed and completed. Project appropriation is $88,000. This includes NOAA Federal funds of $28,000 and $60,000 from State General Fund (LNR 401).

Ulua Tagging (Contract No. 52851)

This statewide volunteer angler-based fish tagging project will continue to have volunteer anglers capture, tag and release all marine fish species known as ulua and papio. Analysis will continue on the data collected thus far and be assessed by species to determine growth, movement and other parameters that can be applied toward management strategies for these species. Data also will be analyzed and processed to begin production of a stock assessment model for the omilu, *Caranx melampygus*, specifically for the island of Oahu. The ulua and papio species account for the biggest recreational fishery in the state. With increasing demand, the supply of these fishery stocks may become jeopardized thus the need to promote management of the fishery. Project appropriation is $47,000 in Federal funds from the U.S. Fish and Wildlife's Sport Fish Restoration Program.

Finfish Broodstock and Larvae Culture (Contract No. 52994)

This project is part of DAR's sport fish restoration effort to improve existing stocks of depleted coastal fish stocks. The tagging and release of selected marine finfish (e.g. moi) along our coastal shoreline will help to re-establish these once depleted fish species. An important component of our stock enhancement study is to determine whether our enhancement effort is actually working. Ideally, to improve the fisheries, we need to determine whether our released stocks are mating with wild stocks. To address this question, extensive DNA analysis is being conducted on fin-clipped moi. DNA analysis is being conducted on individual AFRC moi broodstock to provide a genetic "fingerprint." Microsatellite

markers in the offspring will indicate which parents contributed genetic material. The offspring which are later tagged and released will ideally end up mating with wild moi. Wild moi finclips acquired from our monthly cast net sampling and from specimens submitted by our volunteer recreational fishermen will hopefully tell us whether our cultured moi is mating with wild moi and contributing to the reproductive potential of our moi fisheries, thereby providing insight into the effectiveness of our current stock enhancement efforts. Equally important, the fisheries information gathered from this project will help to evaluate the health of nursery habitats to sustain this species, their seasonal recruitment and migration patterns, the mixing of existing wild with cultured tagged stocks, etc. Also, the support of this project will allow the continuing investigation into the spawning, larval rearing, grow out, and potential stock enhancement of other popular coastal finfish species such as kumu and ulua. Project appropriation is $45,000 in Federal funds from the U.S. Fish and Wildlife's Sport Fish Restoration Program.

Hawaii Marine Recreational Fishing Survey (Contract No. 48518)

The recreational fishing survey project will continue to collect and analyze survey data to determine effort of private boats and shoreline fishing modes. Direct intercept surveys with shoreline and recreational boat fishermen will be conducted statewide with the following data being collected: catch, effort, species, gear type methods, disposition of catches or releases, and demographic information of the angler. The survey data is then processed and converted into baseline data to reflect the amount of fishing pressure exerted on the marine resources, i.e. the amount of resources being taken and the rate of removal of these same resources. This information can then be used in managing the resources. Project appropriation is $515,425. This includes Federal funds of $365,425 ($143,005 from NMFS, $172,500 from the Sport Fish Restoration Program, and $49,920 from UH's Joint Institute of Marine and Atmospheric Research) and $150,000 from the State's Commercial Fisheries Special Fund, LNR 153.

Approval to amend/extend the Agreements has been requested from the Governor, through the Department of Budget and Finance for review and approval. Also, the amendments to the Project Agreements have been submitted to the Attorney General's Office for preliminary approval as to form.

RECOMMENDATION:

"That the Board authorize the Chairperson to negotiate and, subject to necessary approvals, amend/extend seven Project Agreements with the Research Corporation of the University of Hawaii for FY 08."

Respectfully submitted,

DAN POLHEMUS
Administrator

APPROVED FOR SUBMITTAL:

PETER T. YOUNG
Chairperson